CLAIMS

1.   A processor for use in a Voice over Internet Protocol (VoIP) telephone, comprising:

a bus;

5   a processor core coupled to the bus;

a packet handler coupled to the bus, the packet handler including plurality of first ports for interfacing to one or more workstations;

a voice handler coupled to the bus, the voice handler including at least one second port for interfacing to a telephone;

10   a cell/frame handler coupled to the bus, the cell frame handler adapted to couple to one or more packet networks; and

a peripheral control processor coupled to the bus for handling interrupts and DMA requests.

15   2.   A processor according to claim 1, wherein the packet handler includes a bus bridge for interfacing to the bus, a 10/100bT interface, a wireless LAN interface, a Universal serial bus interface, and a home phoneline networking alliance interface.

20   3.   A processor according to claim 2, wherein the voice handler includes a bus bridge for interfacing to the bus, one or more PCM ports, a mailbox, and a DSP core.

4.   A processor according to claim 3, wherein the cell/frame handler 25   includes a frame handler for sending and receiving frames over the one or more packet networks, an ATM handler for sending and receiving data over ATM networks, and an encryption unit for encrypting the data.

5.   A method for providing a Voice over Internet Protocol (VoIP) 30   processor comprising:

providing a bus;

providing a processor core coupled to the bus;

providing a packet handler coupled to the bus, the packet handler including plurality of ports for interfacing to one or more workstations;

providing a voice handler coupled to the bus, the voice handler including at least one port for interfacing to a telephone;

5 providing a cell/frame handler coupled to the bus, the cell frame handler adapted to couple to one or more packet networks; and

providing a peripheral control processor coupled to the bus for handling interrupts and DMA requests;

10   6. A method according to claim 5, wherein providing the packet handler including providing a bus bridge for interfacing to the bus, a 10/100bT interface, a wireless LAN interface, a Universal serial bus interface, and a home phoneline networking alliance interface.

15   7. A method according to claim 6, wherein providing the voice handler including providing a bus interface for interfacing to the bus, one or more PCM ports, a mailbox, and a DSP core.

      8. A method according to claim 7, wherein providing the cell/frame
20 handler including providing a frame handler for sending and receiving frames over one or more packet networks, an ATM handler for sending and receiving data over ATM networks, and an encryption unit for encrypting the data.

      9. A telecommunications system, comprising:
25 a local area network;

a workstation;

a telephone; and

a Voice over Internet Protocol interface coupling the telephone and the workstation to the local area network, the VoIP interface including a VoIP
30 processor, the VoIP processor including

        a bus,

        a processor core coupled to the bus,

packet handler coupled to the bus, the packet handler including plurality of ports for interfacing to the workstation,

voice handler coupled to the bus, the voice handler including at least one port for interfacing to the telephone,

5   cell/frame handler coupled to the bus, the cell frame handler adapted to couple to the local area network, and

peripheral control processor coupled to the bus for handling interrupts and DMA requests.

10   10.   A telecommunications system according to claim 9, wherein the packet handler includes a bus bridge for interfacing to the bus, a 10/100bT interface, a wireless LAN interface, a Universal serial bus interface, and a home phoneline networking alliance interface.

15   11.   A telecommunications system according to claim 10, wherein the voice handler includes a bus interface for interfacing to the bus, one or more PCM ports, a mailbox, and a DSP core.

20   12.   A telecommunications system according to claim 11, wherein the cell/frame handler includes a frame handler for sending and receiving frames over the one or more packet networks, an ATM handler for sending and receiving data over ATM networks, and an encryption unit for encrypting the data.

13.   A method of providing a telecommunications system, comprising:
25   providing a local area network;
providing a workstation;
providing a telephone; and
providing a Voice over Internet Protocol interface coupling the telephone and the workstation to the local area network, the VoIP interface including a VoIP
30   processor, the VoIP processor including
a bus,
a processor core coupled to the bus,

a packet handler coupled to the bus, the packet handler including plurality of ports for interfacing to the workstation,

voice handler coupled to the bus, the voice handler including at least one port for interfacing to the telephone,

5   a cell/frame handler coupled to the network, the cell frame handler adapted to couple to the local area network, and

a peripheral control processor coupled to the bus for handling interrupts and DMA requests.

10   14.   A telecommunications method according to claim 13, wherein providing the packet handler including providing a bus bridge for interfacing to the bus, a 10/100bT interface, a wireless LAN interface, a Universal serial bus interface, and a home phoneline networking alliance interface.

15   15.   A telecommunications method according to claim 14, wherein providing the voice handler includes providing a bus interface for interfacing to the bus, one or more PCM ports, a mailbox, and a DSP core.

16.   A telecommunications method according to claim 15, wherein 20   providing the cell/frame handler includes providing a frame handler for sending and receiving frames over one or more packet networks, an ATM handler for sending and receiving data over ATM networks; and an encryption unit for encrypting the data.